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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,448	11/03/2003	David Sparrowe	MERCK-2775	3497

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EXAMINER	
LISTVOYB, GREGORY	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
09/03/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@mwzb.com

Office Action Summary	Application No.	Applicant(s)	
	10/698,448	SPARROWE ET AL.	
	Examiner	Art Unit	
	GREGORY LISTVOYB	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9,18,20,22-27,30-32,41-43 and 48-56* is/are pending in the application.

4a) Of the above claim(s) *18 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,22-27,30-32,41-43 and 48-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 53-56 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

New Claims 53-56 are dependent on claims 18 and 20, which are withdrawn as being related to a non-elected process of making. Therefore, the claims above are indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-9, 22-27,30, 41-43, 48-52 rejected under 35 U.S.C. 102(b) as being anticipated by Toyoshima et al (US 2001/0025414), herein Toyoshima or Chen (US patent 5330840, both cited in the previous Office Action)

Toyoshima discloses a multilayered wiring board (electronic device, see Abstract) comprising Methoxymethylolmelamine (Cymel 370, see line 99), which is

capable of forming a crosslinked polymer with itself and/or with at least one multifunctional compound and polyvinyl acetal, which is reactive derivative from polyvinyl alcohol, which has Hydroxyl groups (see line 0099, Example 1).

Note that Toyoshima discloses broad range of melamine derivatives (see Fig.3), which meets the limitations of claims 3-9

In addition, Toyoshima teaches Butadiene Acrylonitrile copolymer, which can be considered as an initiator, since Acrylonitrile fragment can be considered as acid derivative and it hydrolyses in water yielding amido groups.

On the other hand, polyvinyl acetal reacts with Cymel 370 first, forming "its crosslinked polymer product obtainable by crosslinking said amine derivative with itself or with at least one multifunctional compound" as claimed in claim 1. In other words, since the polymer, based on the Methoxymethylolmelamine is claimed, the reaction product of Cymel and polyvinyl acetal can be considered as an amine derivative

Therefore, in both cases the limitations of claims 1 and 46-47 are met.

Regarding claim 40, Toyoshima teaches film thickness of 50 um (see line 0127).

In reference to claim 42, Toyoshima teaches dielectric constant value of 4.5-4.8 (see Table 5).

Regarding claims 48-49, physical properties of Toyoshima's composition are inherently equal to ones of the composition claimed, since their structures are identical.

Chen discloses a composition formed with cross-linkable melamine formaldehyde resin 2-80% of Cymel 303 as well as Cymel 380 and 385 (Column 6, line 5 and Claim 3), which is identical to one used in the Application examined (see page 24, mixture M1 of the Application), 25-60% of polyurethane-siloxane (Column 6, line 5 and Claim 1), 0.001-1% of acid catalyst (Column 7, line 5, meeting the limitations Claims 30 and 39). Chen discloses a coating with thickness of 0.5- 50 um (see Column 7, line 30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 31-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoshima or Chen as applied to claims 1, 3-9, 22-27,30, 41-43, 48-50 above, and further in view of Barancyk. (US 2004/0044165) all cited in the previous Office Action.

Toyoshima discloses a multilayered wiring board (electronic device, see Abstract) comprising Methoxymethylolmelamine (Cymel 370, see line 99), which is

capable of forming a crosslinked polymer with itself and/or with at least one multifunctional compound and polyvinyl acetal, which is reactive derivative from polyvinyl alcohol, which has Hydroxyl groups (see line 0099, Example 1).

Note that Toyoshima discloses broad range of melamine derivatives (see Fig.3), which meets the limitations of claims 3-9

Chen discloses a composition formed with cross-linkable melamine formaldehyde resin 2-80% of Cymel 303 as well as Cymel 380 and 385 (Column 6, line 5 and Claim 3), which is identical to one used in the Application examined (see page 24, mixture M1 of the Application), 25-60% of polyurethane-siloxane (Column 6, line 5 and Claim 1), 0.001-1% of acid catalyst (Column 7, line 5, meeting the limitations Claims 30 and 39). Chen discloses a coating with thickness of 0.5- 50 um (see Column 7, line 30).

Toyoshima and Chen do not disclose para-toluene sulfuric acid as a catalyst.

Barancyk discloses a coating composition based on siloxanes (see line 0027), urethanes (see line 0049), diols (line 0061) and cross-linking agent, based on Cymel (see line 0082). Note that Barancyk's composition includes the same ingredients as Chen's one.

Barancyk uses para-toluene sulfonic acid as a catalyst (see line 0215). The advantage of the above catalyst compare to TFA used by Chen is that para- toluene sulfonic acid has much higher boiling point, making possible high temperature cure.

Therefore, it would have been obvious to a person of ordinary skills in the art to use para-toluene sulfonic acid as a catalyst to perform high temperature curing process.

Response to Arguments

Applicant's arguments filed on 5/22/2009 have been fully considered but they are not persuasive.

Applicant does not submit any arguments regarding rejection under 35 USC 102(b) based on Toyoshima.

Please note that Examiner reconsiders this reference, stating that the Toyshima actually meets all the limitations of amended claim 1. In fact, Toyoshima teaches all the features of the diamine derivative claimed (see Fig.3). As a result, the present Office Action is issued as Non-Final one.

Regarding rejection under 35 USC 103(a), Applicant argues that "The polymer formed in Example 1 of Toyoshima et al. is not a polymer obtainable by crosslinking at least one organic amine derivative with itself".

Examiner disagrees. Firstly, "obtainable" means intended use, but not an actual composition. Secondly, Toyoshima's amine derivative has all the functional groups claimed. Thirdly, since the polymer, based on the Methoxymethylolmelamine is

disclosed, the reaction product of Cymel and polyvinyl acetal can be considered as an amine derivative. Therefore, the reference teaches all the limitations of the amended claim 1.

Applicant does not submit any arguments on Chen and Baranchyk references.

Note that rejections under 35 USC 112(1) and rejection under 35 USC 103(a) based on Knudsen have been withdrawn due to claim amendments.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY LISTVOYB whose telephone number is (571)272-6105. The examiner can normally be reached on 10am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GL/GREGORY LISTVOYB/
Examiner, Art Unit 1796